

**SUBSTITUTE ABSTRACT:**

The invention relates to a robot vacuum cleaner for cleaning surfaces (9), which robot vacuum cleaner is provided with a housing (1), a suction unit (3) accommodated in the housing, a suction nozzle (7) mounted to the housing so as to be present near the surface in operation, a motor-drivable wheel system (13) by which the housing can be displaced over the surface, and an electrical control unit (17) for controlling a displacement of the housing generated by the wheel system. According to the invention, the displacement of the housing controlled by the control unit (17) includes a substantially cycloid movement brought about by a rolling movement of an imaginary rolling circle (37) along an imaginary line of displacement (39) of the housing over the surface, the imaginary rolling circle extending parallel to the surface (9) and being fixed with respect to the housing (1), and the suction nozzle (7) being eccentrically arranged with respect to the rolling circle. As a result, the width of the track cleaned by the suction nozzle during the displacement of the robot along the line of displacement is considerably larger than the main dimension ( $W_s$ ) of the suction nozzle.